3/31/78
D.1

M E M O R A N D U M

ALLIED CHEMICAL - Plant Visit
(Fairmont City)

TO: Division of Water Pollution Control, Field Operations Section & Records Unit

FROM: Eric W. Merz, Region IV, Collinsville

DATE: March 31, 1978

INTERVIEWED: Mr. Larry Losie - Plant Manager
Mr. Dennis Hatfield - Environmental Engineer - Chicago Office

On the above date the writer met with the above gentlemen and discussed the operation of the Allied Chemical-Fairmont City plant in regards to water handling.

The following briefly summarizes the writer's findings:

PHOSPHORIC ACID PLANT

This portion of the plant shut down and was dismantled in 1968. All that remains are stockpiles of gypsum ($CaSO_4$) which is a waste product left from the production of the acid.

SULFURIC ACID PLANT

The sulfuric acid manufacturing plant was shut down and dismantled in 1974.

ALUM PLANT

Wastewater generated from the production of alum is first collected in a sump and then transferred to neutralization facilities. The neutralization facilities basically consist of primary and secondary agitator neutralization units fed by a lime slurry tank.

After the waste is neutralized it is pumped to two in series settling ponds. Water from either of the ponds drains by gravity to a sump and is pumped back to the alum plant for reuse.

Alum produced at the plant is sold by bulk locally to jobbers who in turn package it and sell it to water treatment plants.

SAS (Sodium Aluminum Sulfate) PLANT

Wastewater generated from the production of SAS is collected in a sump and then transferred to the neutralization facilities which are the same facilities utilized by the alum plant.

The SAS plant does not utilize recycled water. Water used in this process is obtained from the local public water supply.

SAS is used in the manufacturing of baking soda. (28% of baking soda is SAS).

SANITARY FACILITIES

Five non-overflow septic tanks serve the office building and employee wash room facilities. Allied Chemical employs 62 people. A maximum of 36 people can work one shift. The plant will run 24 hours per day depending upon the demand for alum and SAS. The plant can also be shut for 1 or 2 weeks at a time.

SETTLING PONDS

Allied Chemical has applied for a permit to add an additional settling pond because one of the two existing ponds is almost completely filled with solids (sand-like material).

Allied Chemical had indicated that as much as 25% of the water diverted to the pond was being lost due to percolation. The writer questioned Mr. Losie and Mr. Hatfield as to how they calculated the 25% loss. They indicated it was more or less an estimate based on the addition of water from the public water supply.

Allied Chemical does routinely sample two wells in the vicinity of the ponds. Mr. Hatfield stated iron was only tested for ~~and~~ that parameter was present in high concentrations. The area, however, has a history of naturally occurring high ground water iron concentrations.

The ponds were inspected and found to be adequately maintained. Pond #1 is the pond that is almost filled with solids. The proposed pond will be built adjacent to it.

The only problem noted was the need to cover all the pond berms with gypsum. Some of the berms were constructed of sand left from prior ponds. The sand blows during periods of wind. The gypsum does not and seems to support more vegetation.

CONFIDENTIAL

The writer also briefly visited the outlets where waste used to be directly discharged to Rose Creek. The outlets were dry.

The above is for your information.

Emil W. Mey

EWM/cas
4/11/78
attachments

cc: Region IV
cc: Permits - Mark Bryant

Allied Chemical - Fairmont City

Flow Diagram

E.W. MERZ

Date 12-2-74